

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Dave Meier <71571.1744@CompuServe.COM>
Subject: RE: 32V3 Microphone connector?
Message-ID: <960915230800_71571.1744_FHD50-2@CompuServe.COM>

If the two pin plug you need is the same one Heathkits used to use, I found some at the RF Connection, a commercial outfit in the Washington DC area that displays at hamfests. They sell the connectors for \$3.

Dave N4MW

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: knudsen@gvmail.ih.lucent.com
Subject: 51J3 Xtal Filter Box?
Message-ID: <9609161845.AA04832@bock.ih.lucent.com>

Anyone know how to get the cover box shield off the xtal filter assembly of a 51J3?
I removed the one screw in the top front, but could not jiggle and pull the cover loose.

I checked out a couple screws under the chassis, right at the front, but they hold down the front of the subchassis. I don't want to try pulling the whole thing, just the cover.

There are a couple nuts under the chassis that hold tie strips, right next to the power xfmr. Pretty messy to get those out, tho. Much of the 51J reminds me of the Heathkits where you had to assemble things in the manual's order -- or send in trained mice to install the nuts you could no longer reach.

Why do I want inside the xtal filter assembly? Cuz I think the phasing variable cap has broken loose from its front mounting screws. It pushes in and out when you push/pull on the knob. Doesn't affect the phase tuning at all, but someday the wires inside will break. I'd like to get in there and apply some slow-curing epoxy to the cap body, if indeed it's broken.

You guys with the instructions on upgrading to a J4, maybe they tell how to remove the old unit (w/out chisels and dykes?).

BTW I fixed the AGC problem last nite -- the triple 0.1 mF bathtub condenser had a wee bit of leakage to ground. Since the AGC detection runs at -50V below ground, a few nano-mhos of conductance upsets the DC amplifier's threshold and dumps AGC voltage into

your RF/IF. REALLY glad the bug wasn't one of the small Rs or Cs buried down in the chassis.

Also my noisy wirewound AF Gain pot fixed itself after a few days' use. Good thing, since it's sealed tight.
Now if the J3 only had flywheel inertial tuning, it would be the best rx going -- and might weigh as much as an R390 too :-)

73, mike k aa9rg

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Glenn Finerman <GFINER@nms.com>
Subject: 51S1 Sighted -Reply
Message-ID: <s23d2418.021@nms.com>

Thanks for the "sightings" info Chip!

re>modified (factory) to include a rack mount. The rackmount and front
>panel are painted light green (!)

Do you mean the original Collins front panel was painted-over green?
or it's green right from the factory? (green pebble instead of grey??)

re>The front panel includes a tag identifying the set as Radio Receiver,
>General Purpose, General Dynamics Model XXXX, Serial
>I honestly don't know whether this ruins its value as a collectible
>Collins, or increases its value as a collectable General Dynamics.
> His asking price was \$550, but he indicated willingness to take \$375

I guess replacement overlays are out of the question????

73.....Glenn N2BJG GFINER@NMS.COM

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: Dave Creek <dcreek@pixi.com>
Subject: Re: 51S1 Sighted -Reply
Message-ID: <Pine.PCW.3.95.960916062201.7927C-100000@godzilla29.pixi.com>

On Mon, 16 Sep 1996, Glenn Finerman wrote:

> Thanks for the "sightings" info Chip!
>
> re>modified (factory) to include a rack mount. The rackmount and front

> >panel are painted light green (!)
>
> Do you mean the original Collins front panel was painted-over green?
> or it's green right from the factory? (green pebble instead of grey??)
>
> re>The front panel includes a tag identifying the set as Radio Receiver,
> >General Purpose, General Dynamics Model XXXX, Serial
> >I honestly don't know whether this ruins its value as a collectible
> >Collins, or increases its value as a collectable General Dynamics.
> > His asking price was \$550, but he indicated willingness to take \$375
>
> I guess replacement overlays are out of the question????
>
>
> 73.....Glenn N2BJG GFINER@NMS.COM

During my 20+ years in the USAF, I worked on many General Dynamics check-out consoles (AGM-28 Hound Dog missile and F-111). These consoles contained several pieces of commercial off the shelf test equipment (Tektronix, HP etc.). All equipment was painted GD light green and had GD tags. I believe this painting and marking was done by the original vendor per GD contract specs. GD was not the only company that did this.

Dave Creek, NH6BA
Ewa Beach, HI
dcreek@pixi.com

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: "James C. Owen, III" <owen@apollo.eeel.nist.gov>
Subject: Re: 51S1 Sighted -Reply
Message-ID: <52873.owen@apollo.eeel.nist.gov>

In message Mon, 16 Sep 1996 11:32:22 -0500 (CDT),
Dave Creek <dcreek@pixi.com> writes:

>
> On Mon, 16 Sep 1996, Glenn Finerman wrote:

>> Do you mean the original Collins front panel was painted-over green?
>> or it's green right from the factory? (green pebble instead of grey??)
>>

>
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> check-out consoles (AGM-28 Hound Dog missile and F-111). These consoles
> contained several pieces of commercial off the shelf test equipment

> (Tektronix, HP etc.). All equipment was painted GD light green and had GD
> tags. I believe this painting and marking was done by the original vendor
> per GD contract specs. GD was not the only company that did this.

>

> Dave Creek, NH6BA

> Ewa Beach, HI

> dcreek@pixi.com

>

I want to Echo Dave. When I worked for Defense Electronics Inc. 28 + years ago, we supplied some systems to GD to be used on the Atlantic Missile Range and on the ARIA aircraft. All of our usual Gray panels were changed to GD Lime Green. I think that every piece of equipment we supplied to GD was painted that Green color. 73 Jim K4CGY

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996

From: dvorkin@pcs.mot.com (Vlad Dvorkin)

Subject: 5678 tube question

Message-ID: <199609162031.QAA05520@iron65.pcs.mot.com>

Gentlemen,

Does anybody know about a 5678 subminiature tube (RF penthode) substitutes with a sharp cut-off characteristics (direct cathode or with a heater).

Please reply directly to Vlad at: dvorkin@pcs.mot.com

Thanks in advance.

Regards,

Vlad

KB9OLM

ex. UA3ACR

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996

From: "Dennis L. Wade" <wade@mpu.com>

Subject: 9/14 Foothill Observations

Message-ID: <323CAFA7.7380@mpu.com>

Greetings All!

I always enjoy the posts which summarize a persons observations at various swap meets/hamfests, so I thought I would offer a few of my own from the last session of the Foothill College (SF Bay Area) Electronics Swapmeet held yesterday.

Although I haven't been there in several years, my recollection was that it would have a fair selection of BA material with more that a few

islands of more

modern/computer "stuff". I went with a shopping list of roughly 10-15 times my budget, with Tek scope stuff and test equipment at the top of the list.

My experience was wonderful! Lots of sellers (the last and first of the season are rumored to be the best to go, and June the worst). Didn't get there as early as I would have liked (about 0800), but still had ALot to look at.

And what should I find sitting in the first aisle - a Tek 535 with CA plugin sitting on top of a Scopemobile with 1A1 and 1A2 plugins. He was asking \$100 for the package. I lamented that all I really needed was the cart and extra plugins since I already had a 545A at home. To my surprise, he said "Make me an offer" and \$40 later, I was trying to squeeze the thing into a Nissan Sentra (I'll spare you those details).

The One That Got Away: A nice BC-221 with calibration book spied minus its owner. All gone, including owner and truck when I tried to find them again :(

Other observations (condition refers to cosmetic only):

R-392	VG	\$100
SX-99	VG	\$200
LAFYETTE HE-80	VG	\$ 75
S-129	F	\$ 35
S-38B	F	\$ 35
SB-101	G-VG	\$225
HT-40	P-F	\$ 35

Most interesting piece: A tuning head said to be from a Russian long range bomber (complete with Cyrillic labels) covering 150-1500 kcs. (why would a long range bomber need VLF?)

I'm sure I missed more than a few. Maybe someone who got there earlier can tell me what I missed - I think I'm hooked again! Now let's see....Livermore is which weekend?

Well, time to go out and see how well those plugins play with the 545.

Anybody got a probe to trade for a Type "H" plugin?

73 Dennis KG6ZI Folsom, CA

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Hadley Allhands <had@halcyon.com>

Subject: ??:TV-7 Question

Message-ID: <Chameleon.4.01.2.960915220109.had@halcyon.com>

-----Original Message-----

Hi BA'ers

Well after who knows how many years the old TV-7/B decided to quite. Looks like the meter rectifier (CR-101) has retired.

Is there a perfered replacement?

Thanks for the help, Hadley

Name: Hadley Allhands, K7MLR
E-mail: had@halcyon.com hadley@arva.com

-----End of Original Message-----

Name: Hadley Allhands, K7MLR
E-mail: had@halcyon.com hadley@arva.com

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Bob Marsh <bmarsh@hicom.net>
Subject: Adventures in Troubleshooting (Murphy Lives!)
Message-ID: <323D53D6.6390@hicom.net>

Hi all,

I'm happy to say the HW-16 is working again. After all the E-mail, checking, and banging my head against the wall, it turns out that I had a shorted "known good" coax connector. Looks like I checked everything but the obvious. At least it was tube finals, or I would have gone broke buying transistors!

I also got my first lesson in using a scope, and it's helped even more than I expected. The procedures I was using were mostly ok, but I just couldn't evaluate the results. At least I know a little more than I did before, and i have somewhere to start from.

Thanks to all of you who provided advice and/or encouragement.

73 de Bob/KB2SGM
<bmarsh@hicom.net>

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: Spencer Petri <spetri@e-tex.com>
Subject: Another question!
Message-ID: <m0v2iSh-0002GpC@e-tex.com>

Hello fellow filament followers,

What is the longest, in use time, a tube has been run? Isn't the Voyager spacecraft still sending back info? How about the underwater telephone amps?

73 de Pete WA5JCI

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: carl yaffey <cyaffey@sprynet.com>
Subject: Another request for info
Message-ID: <2.2.32.19960916145958.006f208c@m1.sprynet.com>

Boy, you start looking into finding old equipment and things start haeppening. I found a 32V2 and put a bid in on it. And, sitting right next to it was more stuff! So, could some of you please give me an idea as to the worth of: Hammaurland HQ-129-X, Drake TR4, TR4-C, L4B. All are in excellent condition. I'm not sure this person wants to sell any of them at this point, but I'm getting prepared just in case. TNX in advance,
73, Carl K8NU

Carl Yaffey K8NU cyaffey@sprynet.com 614 268 6353 Columbus OH

Banjo player for One Riot One Ranger, independent software developer.

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From boatanchors@theporch.com Mon Sep 16 09:53:44 1996

From: carl yaffey <cyaffey@sprynet.com>

Subject: Anybody remember me?

Message-ID: <2.2.32.19960915225845.00cd85ec@m1.sprynet.com>

I've recently joined this list and already found one old friend from my early Ham days in Norfolk, VA where I was W4EZB (and called "Cy"). Anybody else out there from back then?

Also, I want to thanks all of you who have given me info on the 32V3. It has helped a lot.

73,

Carl K8NU

Carl Yaffey K8NU cyaffey@sprynet.com 614 268 6353 Columbus OH

Banjo player for One Riot One Ranger, independent software developer.

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From boatanchors@theporch.com Mon Sep 16 09:53:44 1996

From: carl yaffey <cyaffey@sprynet.com>

Subject: Anybody remember me?

Message-ID: <2.2.32.19960916130650.006e8010@m1.sprynet.com>

I've recently joined this list and already found one old friend from my early Ham days in Norfolk, VA where I was W4EZB (and called "Cy"). Anybody else out there from back then?

Also, I want to thanks all of you who have given me info on the 32V3. It has helped a lot.

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Carl K8NU

Carl Yaffey K8NU cyaffey@sprynet.com 614 268 6353 Columbus OH

Banjo player for One Riot One Ranger, independent software developer.

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From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: BA/GB Net Funzies
Message-ID: <9609161558.AA104361@csemail.cropsci.ncsu.edu>

Attention All Hands!

Y'all missed a fine weekend aboard the BA/GB net. We even had a grande ol' '29 style Hartley peanut whistle (courtesy Sandy/W5TVW) well heard on 40/80M. The 40M band was a bit rough with some fone test going and the QRM was rough there. The 80M band was sweet as maple syrup. Had checkins from Toronto/Chitown/Loosiana/Tennessee/NC/and elsewhere that I can't remember right off. So, mateys..... grapples ye up yer tin cans atop yer noggins, fires ye up yer filaments to a goodly glow, an' readies ye yer keys at the fore....., cuz the winter season is at hand, an' the BA/GB/CWist Friendly Firebottle Fist Function is a'perkin' up well, it is..... Comments from the hands signed aboard for the watch are appreciated, to jiggle an' nudge those that jest be a'thinkin' an' not quite yet a'moovin' on the BA/GB net. If ye might have needs o' a JANuine quartzian rock fer the 40M or 80M QRG, lets me knows yer needs, an' perhaps ye might be findin' a good rock fer yer dusty ol' novice rig. Else, grapples ye up yer ol' dusty televiseovisormachinen an' dykes, an cuts ye out a fine 80M QRG televiseovisormachinen rock! (Fer them that knows not wat dykes they be, them are the same as ``diagonal side-cutting nippers'' or ``wire-cutters'' as some knows them in the trade --- an' ye might could get it a'loose wid a mighty hot copper fire-iron, too).

Lest ye thinks ol' novice rigs be only so-so in their mettle, consider the fine and well heard keelowatt DX-40 o' ol' Dale/AD4YH (an yes, Myrtle, he do run a mean KW afterburner on that fine little ol' DEE-X FOURTY!). It doo punch some mighty fine holes in de ol' ether, it doo.....!

Lest ye thinks ol' peanut whistles be not of sufficient mettle to properly burn holes in said ether, ol' Sandy's fine '210 ether-puffin' firebottle burner, runnin' mebbe some 3R5 watts out, put in a fine 559 signal all the way back to the East Coast on 80M, no less!

So, mateys, Glowbuggites, an' Boatanchorites o' the first water, get ye aboard an signs ye on for a fine winter's watch aboard the BA/GB net! Puts ye yer radiomaschinen to goodly use other than dust-bunny collectin'!

QTR 0100 UTC QRG 7050R500 KHZ
QTR 0200 UTC QRG 3579R545 KHZ
QTR 0300 UTC QRG 1802R500 KHZ (all QRG's +- QRM/QRN/Rocco tolerances)

TU SEE U QTR QRG BT

73/ZUT DE NA4G/Bob UP

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: tomrice@netcom.com (Tom R. Rice)
Subject: Christmas Tree Blocks....
Message-ID: <199609161501.IAA04627@netcom11.netcom.com>

In an article in ER 69 (Jan, 1995), James Buchanan,
K8WPI, tells us how to wire up a patch panel.
("Audio Patching the Professional Way").

I have discovered a whole bunch of NOS
Christmas Tree Blocks in the barn, dating from
my merry telephone days. They're very
clean; the mice seem to have ignored them!
These blocks are at the heart of a "pro" job,
as seen in broadcast and recording studios of the past.

(If you're into telephony, they're also the items used
on telco distributing frames, i.e., MDF.)

If anyone out there is working at this high level
of perfectionism, e-mail me and we can move these
blocks to where they'll do some good.

Some will be presented at the Livermore swap in hopes
of appeal to the glass audio crowd.

--

"Start off every day with a smile and get it over with." --W.C.Fields
Tom R. Rice
tomrice@netcom.com
CIS: 71160,1122

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Walt Novinger <waltn@earthlink.net>
Subject: Dan Nelson's TV-7D/x overhauls
Message-ID: <2.2.32.19960916031157.006866b8@earthlink.net>

Fellow BAists,

I just received my TV-7D/U back from Dan Nelson and want to publicly thank
him for a job well done and recommend his services to others of the BA
persuasion. Quoting from the detailed invoice and test report, the following

was done to my unit:

- Rebuilt 7- and 9-pin socket savers
- R103 in plate circuit cooked - replaced
- Line cord rotted - replace with 3-wire
- 83 tube OK
- 5Y3 - replace with 5Y3WGTA as spc'd
- Meter OK - improve action
- Line Pot wired backwards - rewired
- Rewire primary to eliminate splice
- Rebuild clip lead - eliminate hardned insulation
- Adjusted all voltages

His test report includes tolerances and actuals for all voltage and other tests he performs (lots!), and test results against his "reference" tubes. In short, Dan does one hell of a lot of work for a very fair price (US\$45 + UPS). The unit was gone for about three weeks...not bad!

I highly recommend Dan's work--I just wish he worked on AN/USM-118Bs, too. He also included a long list of toobz, priced very fairly. Dan advertises in ER regularly, and can be reached at 1025 E. Desert Lane, Phoenix, AZ 85040.

73 de Walt

=====

Walt Novinger	Real Radios Keep You Warm At Night!
Collector of hollowstate communications receivers and test equipment	
waltn@earthlink.net	wnovinger@shl.com CI\$: 73340,2015

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: "Benjamin D. Hall" <bdhall@ghgcorp.com>
Subject: Re: Dan Nelson's TV-7D/x overhauls
Message-ID: <323D05BB.5C9E@ghgcorp.com>

Walt Novinger wrote:

- > I just received my TV-7D/U back from Dan Nelson and want to publicly thank
- > him for a job well done and recommend his services to others of the BA
- > persuasion. Quoting from the detailed invoice and test report, the (snip)
- > ER regularly, and can be reached at 1025 E. Desert Lane, Phoenix, AZ 85040.

Anyone have a phone number or e-mail address for Dan Nelson?

Thanks and 73,
Ben
--

From the computer of | Collector of fine firebottle
Benjamin D. Hall, Houston Texas | equipment, as well as other things
BDHall@GHGCorp.com -or- | involving Earth, Air, Water, and
BHall@GP802.JSC.NASA.gov | Fire.

"When you clock the human race with the stopwatch of history, it's a new record every time."

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: "Garey Barrell, K40AH" <75025.73@CompuServe.COM>
Subject: Re: Dan Nelson's TV-7D/x overhauls
Message-ID: <960916135418_75025.73_FHD61-1@CompuServe.COM>

>Anyone have a phone number or e-mail address for Dan Nelson?

Daniel Nelson
1025 E. Desert Lane
Phoenix, AZ 85040
(602) 243-7421
djn@indirect.com

73, Garey - K40AH
75025.73@compuserve.com
Atlanta

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: "William D. Lambert" <blambert@interpath.com>
Subject: Drake C-Line S/N's
Message-ID: <199609161439.KAA22929@mail-hub.interpath.net>

Does anyone know what range of serial numbers constitute "late serial numbers" in the Drake R4-C receiver and T4X-C transmitter?

Bill - AK4H

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: azoth@netcom.com (Az0th)
Subject: Re: Drake C-Line S/N's

Message-ID: <199609161624.MAA19476@netcom6.netcom.com>

Hi Bill,

> Does anyone know what range of serial numbers constitute "late serial
> numbers" in the Drake R4-C receiver and T4X-C transmitter?

>From VE3EFJ's drakemod.txt file:

- o R4C ser no above 16121

Revision date - Feb 1973

All mixer tubes 6HS6. First and 3rd mixers cathode injected. Second mixer is a dual gate MOSFET. The IF chain following the first crystal filter is 6BA6 1st IF, Noise blanker and then 2nd mixer. 4 position filter select.

- o R4C ser no above 18726

Revision date - March 1974

All mixer tubes 6HS6. First and 3rd mixers cathode injected. Second mixer is a 6BE6 with an JFET (2N5459) buffer. 5 position crystal filter selection. 3 diodes in series across the S Meter to compress the meter range. 2 S Meter zero pots were employed - one internal and one external.

- o R4C ser no above 21000

Revision date - Nov 1974

All mixer tubes 6EH7. First and 3rd mixers grid injected. Second mixer is a 6BE6 with an JFET (2N5459) buffer. 5 position crystal filter selection. Some intermediate models in this transition period may not have installed the new tapped IF transformer, T7C.

So, actually, a post 21000 SN for an R-4C would be 'late', but collector types commonly ignore anything below 25000, and I've heard some quoting 29000+ SN's as if it meant something. Functionally, there just isn't much difference between any version, other than the number of filter slots.

I don't know of any similar breaks in the T-4XC equipment, but I've heard of SN's in the 26000+ range. FWIW, the SN's of my two C-lines, Rx/Tx are:

25757 & 24711

23566 & 22008

Cheers es 73
RF Buchanan - KF4FJH

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: DRAKE VS. RACAL
Message-ID: <9609161530.aa05327@pcusa01.ecunet.org>

What *exactly* is the ECSS mode?

-John Sehring (09/16/96 9:22 am MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: bgraham@tecnet1.jcte.jcs.mil
Subject: European capacitor marking
Message-ID: <199609160904.FAA29907@tecnet1.jcte.jcs.mil>

Subject: European Capacitor Marking

OK Gang..

I'm working on an old German BC/SW set. It has some
"dog-bone" tubular ceramic caps that are marked
as follows

"5nMF" and "5nKF". One of the 5nMF ones is burned
in half.

I THINK these are 5 nanoFarad caps (.005uf)
and that the K = +/- 10% and the M = +/- 20%

Does anyone know for sure? If not, will take down to
the local excuse for a parts store and see what they
say (not betting they will know).

73

Bill
N5LMX/DA1WG
bgraham@tecnet1.jcte.jcs.mil

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: "michael d. ferraro" <ferraro@ix.netcom.com>

Subject: EV 664 mic wiring Help !

Message-ID: <199609160503.WAA11016@dfw-ix9.ix.netcom.com>

Could someone supply me with the internal wiring of the ElectroVoice 664 microphone ? Specifically, I would like to configure it as high impedance.

Thanks,

73's de K6ZSR " Mike in Montecito "

thanks,

73's de K6ZSR " Mike in Montecito "

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996

From: "michael d. ferraro" <ferraro@ix.netcom.com>

Subject: EV 664 Wiring ?

Message-ID: <199609160447.VAA10310@dfw-ix9.ix.netcom.com>

Could someone supply me with the internal wiring of the ElectroVoice 664 microphone ? Specifically, I would like to configure it as high impedance.

Thanks,

73's de K6ZSR " Mike in Montecito "

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996

From: george.rybicki@lerc.nasa.gov (George Rybicki)

Subject: Fair's out of 390A's

Message-ID: <v01510100ae63536f04b9@[139.88.134.25]>

Just got done talking to a friend at Fair Radio. They are out of 390A's and

dont have prospects for getting any more. So be forewarned and hang on to what you got.

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: Richard Post <POST@ouvaxa.cats.ohiou.edu>
Subject: FS: GR 1176-A analog tube freq meter
Message-ID: <A3955ZWMHIKKLM*/R=OUVAXA/R=A1/U=POST/@MHS>

General Radio 1176A with original manual. Very good working and cosmetic condition. Ten tubes including hard-to-find Amperite 3-4 ballast. All old gear should be built this well! Beautiful layout in the wiring. Is 5 inches high, 19 inch rack panel width, 11 inches deep. Lighted large panel meter and separate pilot light. Black large-wrinkle finish with one scratch in paint (not to the metal) and marks left by the rack panel mounting screws keeping the cosmetics from an excellent rating. (For those without racks, two walnut end frames are available from the factory for \$15 according to the manual ;-). A picture of the wood end blocks is shown in the manual, should be relatively easy to make. Range is 25Hz to 60KHz (excuse me, "cycles per second"). Input can vary from 0.25 volt to 150 volts. Input resistance is half megohm. Wired for 120 volt but can be changed to 240 volt. Power cord is not supplied. (I use the end connector on a cheap extension cord to mate with the chassis-mount plug.)

According to the manual, "It is a convenient and accurate frequency measuring device for general use in the communication laboratory and can be used with crystal frequency monitors such as type 1175-A to indicate continuously the deviation of a radio transmitter from its assigned channel frequency."

Best offer over \$25. First offer of \$50 owns it! Tie goes to "dem I owe one to" Add for actual cost of UPS. Extra shipping refunded. Trades? Still suffering from Hammarlust and National envy!

73 de Rich KB8TAD <rpost1@ohiou.edu>

<http://ouvaxa.cats.ohiou.edu/~post/PIX/BA.HTML>

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: "John Goller" <k9uwa@cris.com>
Subject: FS: Heath & Halli
Message-ID: <199609161833.0AA10962@cliff.cris.com>

Have a Heath HW-32 + HP23 supply and Halli HT-37 that are taking up

space...they both look good....not perfect the HT-37 has a spot on top that was scratched up a bit...about 1" in diameter. Both were sold to me as working. If anyone wants them I will fire them up to be sure if they work properly... QTH is Near Ft Wayne IN
de JOHN K9UWA
John K9UWA

k9uwa@cris.com

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Michael Crestohl <mc@shore.net>
Subject: FS: Original R-390A Organizational Maintenance Manual
Message-ID: <199609161042.GAA21853@northshore.shore.net>

Hello:

I was going through my manuals and found an duplicate in the R-390A binder...

This is the ORGANIZATIONAL MAINTENANCE MANUAL for the R-390A. It shows how to install the receiver, adjust it and do some simple trouble-shooting. This is the Air Force T.O. 31R1-2URR-442 equivalent to the TM11-5820-358-20. This one is dated 14 November 1975.

Anyone want it for \$15.00 plus postage?

Reply by e-mail if interested.

73,

Michael Crestohl, KH6KD/W1
mc@shore.net

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: Richard Post <POST@ouvaxa.cats.ohiou.edu>
Subject: GR 1176-A analog tube freq meter sold
Message-ID: <A4044ZWVHKKI34G*/R=OUVAXA/R=A1/U=POST/@MHS>

That was fast! The GR 1176-A is sold.

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: merrigan@ee.ualberta.ca
Subject: High Quality Manuals -II
Message-ID: <199609160445.XAA14009@uro.theporch.com>

Hello Everyone:

I now have the following high quality manuals for those who are interested:

RCA CR-88
Hammarlund SP-600 Operator's manual
Hammarlund HC-10 Converter manual
Hammerlund HQ-180 manual
Hammerlund HQ-180A manual
R390A Operator's manual TM 11-5820-358-10

These are my own high quality, digital laser reprints.

Email me for more information.

Thanks.

--

merrigan@nyquist.ee.ualberta.ca
Electrical Engineering Student
University of Alberta
Edmonton, Alberta, Canada

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: HISTORY OF TUBES
Message-ID: <9609161530.aa05297@pcusa01.ecunet.org>

In the August 1996 issue of 'Stereophile' magazine (pp. 23-270, there's a long, very interesting letter on the history of tube design & manufacture by Bell & Western Electric. Although it (naturally) focusses somewhat on audio tubes, it's nonetheless interesting esp. the early work.

The author states he is the one who coaxed AT&T to make a few thousand more WE 300B's before the plant shut forever in 1988.

The letter is much too long for me to retype & I don't have a scanner or OCR software. (If someone wants to scan it for posting, I'll send them a copy; email me directly.)

Magazine says it will run a 3-parter on the history of tube amplifier design starting Nov. 96.

Now before I get any wise cracks about this audiophile mag, there's an awful lot of tube stuff in here. Yeah, I know, the upper-end prices & attitudes are silly (and that's far too mild a word!).

-John Sehring (09/16/96 9:06 am MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: HP 200CD MANUAL
Message-ID: <9609161530.aa05298@pcusa01.ecunet.org>

It would be very good if you opened up the unit & let us know what the tube line up is. HP changed a lot of stuff over the years on these units but kept same model #.

-John Sehring (09/16/96 8:30 am MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: "F r6fqHo!ht" <75121.100@CompuServe.COM>
Subject: Magnet Wire
Message-ID: <960915221701_75121.100_IHV44-4@CompuServe.COM>

I have been reading notes on magnet wire and lack of sources. Newark, as expensive as some of their stuff is, still has a great selection for our hobby. Only careful shopping will help to minimize the costs to us all. In this particular example which I cite, I did not look elsewhere.

First, there are more than one type of magnet wire. Polyester film coated magnet wire is the most expensive, is coated twice and is rated at 180 deg C for those HOT uses we subject our transformers to. Second, there is solderable magnet wire. polyester coated and nylon over coat. In many cases this will be ok for our uses. It is much cheaper and runs \$18 for 150' of 20 ga up to \$30 for 6400' of 36 ga. Not bad.

The Polyester film (more expensive and sturdy) has the following specs.

14 ga	80'	\$30
16 ga	126'	\$32
18 ga	200'	\$32
----skip a few----		
24 ga	800'	\$34
26 ga	1260'	\$35
28 ga	1990'	\$39
30 ga	3140'	\$43

34 ga	7800'	\$54
38 ga	19,900'	\$77

The solderable is half the price but twice the cir mil area so it will take twice as much room for the same magnetic density.

So all of us that need magnet wire just have to find someone who is retired (you know, those of us that have nothing to do <g>) who will buy one of each and wind it in smaller set-ups. That is if there are not any electrical shops with ear-shout of us here on the BA list.

The prices, if calculated by the foot are pretty cheap after all. The problem is time and motivation, if enough people need the service done.

I am not volunteering to do this task, but I have thought of it before. I have pipe racks set up at work where we use to keep magnet wire, hook-up wire(pvc and teflon), and bus wire in most sizes. It took up lots of room and considering the ease of availability and not having to order 1 roll on a purchase order or signing out a truck every time someone needed this or that piece of wire it was cheaper to buy it all once and be done with it. The problem now, especially as I don't need it very often, the cost is prohibitive and the space not available.

This is the same problem a small vender will have if this scenario were to be attempted for profit.

Just thoughts to share.

Regards from Hawaii,
Raymond J. Cote

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: MAGNET WIRE
Message-ID: <9609161530.aa05347@pcusa01.ecunet.org>

Why/what is the 'magnet' in magnet wire?

-John Sehring (09/16/96 9:25 am MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: MEASURE CABLE LOSS
Message-ID: <9609160847.aa25008@pcusa01.ecunet.org>

You can check for coax cable loss with nothing more than a transmitter, an

SWR bridge and a resistive dummy loads whose impedance equals the cable to be tested.

Run the test on the frequency you are interested in using. Connect: Transmitter, bridge, cable, dummy load. Tune up enuf to get a full scale reading in the forward mode of bridge and/or adjust cal of bridge. Move bridged to far end of cable, between cable and dummy load.

DO NOT touch anything on the transmitter or bridge cal control.

Repeat test. Note new reading, it will be less than before due to cable loss. Square ratio of readings & convert to dB by taking log of ratio & multiplying it by 20.

-John Sehring (09/15/96 3:46 pm MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: Mark Mandelkern <k5am@lascruces.com>
Subject: Re: MEASURE CABLE LOSS
Message-ID: <199609161936.NAA06432@chile.lascruces.com>

There are some serious errors in some of the notes about cable loss. It's not easy to write formulas on e-mail.

There is a discussion of decibels, with formulas, on page 4.17 of the 96 Handbook. "One formula is worth a thousand words."

Note that the deci is the source of the 10. But 20 is just 2×10 . The 2 has the same effect as squaring the voltage ratio before applying the log. You don't want to do both!

Maybe giving page references in the Handbook might be better than trying to repeat old stuff on e-mail. And it may lead the inquirer to further study!

73,

Mark, K5AM, DM62ni, k5am@lascruces.com

Mark Mandelkern
Las Cruces, New Mexico, USA

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: frank_adams@onf.com (Frank Adams)
Subject: MIL Xtals
Message-ID: <262110.63584868@onf.com>

Anyone need a xtal 8128 CR1A/AR or 8033.3 CR-6/U? Tell me what gear of yours it is useful for, and it's yours.

Frank

--- OffRoad 1.0 unregistered

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: wj5j@juno.com (John D Hensley)
Subject: Mill wanted for cw position
Message-ID: <19960916.010840.6711.0.wj5j@juno.com>

Good Morning group,

1. I'm looking for a standard mill to put in my cw position, preferably in good condition. All caps is fine, but not necessary...just a good feel with some life left on it. The last typewriter shop in our city closed down so it needs to work.

2. Also seeking manuals and schematics for the following pieces of BA esoterica:

- a. Singer Metrics 500khz Panadapter Model SA-8bZ, Type T-100 (should cover unit & p.s.)
- b. Northern Radio Type 105 FSK keyer (ditto)
- c. Northern Radio Type 174 FSK demodulator
- d. AN/SGC-1 (part of TT40) FSK unit (unknown function)

3. Also seeking Viking Ranger 1 in repairable condition. It is for covering a favor in return and will go to a good home.

Have a good week folks.

73, Doug WJ5J

***** WJ5J / NNN0BXX *****
WTF: Heath KS1 p.s. for KL1 amp; HA20 6 meter amp;
National rack spkr, xcal & 15 meter band module for HR060
51J4 parts needed: covers, 3kc & 1kc filters, filter sw, slugs
***** wj5j @ juno.com *****

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Spencer Petri <spetri@e-tex.com>
Subject: My new Collins R-390A
Message-ID: <m0v2PVe-0002HGC@e-tex.com>

Hello to all those who drain the power grid,

Finally wrestled it upon the workbench. Most of the 5814s were no good along with all the 6AK6s. All the infamous 6c4s checked good. Radio worked. Did the CQ product detector mod and it really worked. Dial is about 30kc off on all bands but was pooped and didn't reset the readout. This one actually had the ballast tube and it was good.

Calls for a nap.

73 de Pete WA5JCI

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: Rodger Singley <rbsingl@rs6000.cmp.ilstu.edu>
Subject: National convention/Peoria hamfest
Message-ID: <9609161457.AA100400@rs6000.cmp.ilstu.edu>

I made the short (30 mile) trip to the Peoria fest/convention in search of boat anchors and found little. I did pick up a few items (of course!). I found a decent looking Central Electronics 20A, was complete with manual for \$50 (yes, I probably paid too much but others were in line and the fever set in!) It actually worked after repair of broken wire on relay coil (took awhile and it now is about a 11.8k instead of a 12k coil). Carrier suppression is excellent but opposite sideband suppression is poor, audio balance pots help little so time to check phase shift networks with scope. For curiosity: is the relay really supposed to follow CW keying? looks (and sounds) way too large for such service. Also, is there a delay control for VOX? Finally, suggestions for a VFO, i.e. anyone got a BC458 they don't want?

I also bought a nice looking HG10B vfo (it was cheap and I can always use it to threaten the Valiant if it starts chirping again).

I saw what looked like an old receiver partially buried under guitar amps and old stereos. Seller noticed my interest and told me that "it's an old INTERNATIONAL and you can use it to pick up those ham amateur people that interfere with your tv's". Being from the farm country, I had to inquire whether it was gas or diesel and if it had a 3 point hitch since I assumed it must be a tractor if International Harvester made it. (maybe it has a

front end loader to pick up those annoying hams). Of course it turned out to be an old National (100) and it was a pathetic sight (far past any hopes of restoration).

Finally, I couldn't resist a pair of "baby" boat anchors-the Kenwood twins (forgive me Jack and list members, these were the sets I lusted after as a mid 70's novice). Now if anyone knows where I could find the matching VHF converters for the r599a???

Rodger WQ9E
rbsingl@ilstu.edu

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: "JOHN A. KING (WA1ABI)" <JAK@SUD2.ED.RAY.COM>
Subject: Need Info: Abbott Inst. TR-4 xcvr
Message-ID: <01I9JK00E86A8WWCY3@SUD2.ED.RAY.COM>

Hello BA-folk,

Here's one I've never seen before... any info at all greatly appreciated:

Abbott Instruments "Ultra Short Wave Transmitter-Receiver",
Model TR-4.

This little box greatly predates the 'other' TR-4... looks to be 1930's vintage, separate power supply (missing, of course); possibly on the old 5 meter band. Has separate xmit & receive VFO's and twin binding posts for balanced antenna on the front panel. Anyone recognize this old timer??

Tnx & 73,

John King WA1ABI jak@sud2.ed.ray.com

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Larry Godek <AZCOT@gnn.com>
Subject: New service provider
Message-ID: <199609160419.AAA26622@mail-e2b-service.gnn.com>

I changed providers. All who correspond with me, please note the new address. Hopefully I'll be able to get into my mail box more frequently and with less problems.

Larry AZCOT@gnn.com

I'll try this one for a while, but I like what I'm seeing.
Larry AZCOT@gnn.com KN6TUP/K0TAA0/W8BPV/DL5LS/W6KQL/W00GH

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: knudsen@gvmail.ih.lucent.com
Subject: Re: new toy in the shack
Message-ID: <9609161933.AA04922@bock.ih.lucent.com>

Congrats on your "new" NCX-5. I just recently scored a very nice looking one very cheap too. Glad you mentioned that warning!

Actually, I think as long as you keep the PTT/VOX rocker switch in PTT, and keep the Fcn switch away from CW, it will not go xmit. But don't quote me...

Oddly, going into transmit while hooked to a dummy load is no guarantee of safety either, since if your PA Plate isn't tuned right, you'll put a major overload on the final tubes anyway. But at least you won't have as much RF voltage at the output, trying to arc over your capacitors etc.

Anyway, I haven't tried my NCX5 yet (fer shame!) but will heed your warnings. Can't wait to see how linear that digital dial really is. 73, mike k aa9rg

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: Chuck Penson <penon@sci.mus.mn.us>
Subject: Old books FS
Message-ID: <323DC168.4879@sci.mus.mn.us>

Here are a few old books that have been collecting dust for a while. I think these are fairly rare. All are in very good condition...

The Radio Boys on Secret Service Duty
1922 by Gereld Breckenridge \$20

The Brighton Boys in the Radio Service
1918 by Lieutenant James R. Driscoll \$30

this is a real gem...

Calling CQ: The Advetures of Shortwave Operators
1941 by Clinton B. DeSoto \$30

this isn't so rare...

Tom Swift and His Wireless Message
1911 by Victor Appleton \$20

even less rare...

The Hardy Boys: The Shortwave Mystery

I have two versions: 1945 in which Frank and Joe's callsigns are VN15J and VY84Y, and 1966, updated in which the callsigns are WB2EKA (no listing in the current callbook) and WB2XEJ. The 1945 version is very good condition with a full color dust jacket, \$15. The 1966 version is perfect and has a full color hard cover, \$10.

Also have some Radio Handbooks: 9th, 14th and 23rd editions. Best offer on these. All in very good condition.

Lastly,

Radio Data Handbook by Boyce & Roche 1948. Near perfect. Best offer.

--

Chuck Penson
WA7ZZE

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Dale Braun <dale.k.braun@uwrf.edu>
Subject: Peoria Superfest - Brief Report
Message-ID: <s23d1f3e.073@adngate.adn.uwrf.edu>

I traveled 500 miles, indirectly, for the Peoria Superfest/ARRL National Convention. My last national convention I attended was back in the early 1980's at Cedar Rapids, Iowa. My 20/20 hindsight of that event led me to think this event in Peoria would be spectacular. Plus, reports from other hams about the Peoria Superfest in general really got me excited.

What a disappointment. The outdoor flea market was smaller than most grocery store parking lots. Basically four rows about 50 yards long. The inside flea market/commercial vendors were dominated by the usual hamfest fare - computers, software, computers, baseball cards, computers, arts and crafts, computers, jewelry, and, computers. Maybe that's a little too sarcastic. There were a number of radio vendors, antenna vendors, and LOTS of parts vendors, which was real nice.

And yes, there were radios and BA's to be had, though not many. I got there

late - around 9:30 and I suspect a lot of the good stuff was already gone. Did see the usual Heathkit DX-60's, etc. Probably the best find was a URM-25D for \$10. There was a KWM-2 for \$650 (unsold). Inside were a couple of PRC-47's (I think, not all that familiar with these.) I was looking for old teletype stuff and only came up with a polar relay.

But I did find some coils, capacitors, knobs, etc. And 5 NIB 5763 tubes, military issue.

One final comment. I suspect there will be some general criticism of the ARRL for this "national" convention. Not very well organized, very poor signage, attendance about half that predicted. It was neat meeting Chuck Brady, though, an astronaut who was involved in SAREX.

73,
Dale
WD9GWH

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: "C. J. Hawley" <c-hawley@uiuc.edu>
Subject: Re: Peoria Superfest - Brief Report
Message-ID: <323D8D84.5F55@uiuc.edu>

Dale Braun wrote:

> What a disappointment. The inside flea
> market/commercial vendors were dominated by the usual hamfest fare - computers,
> software, computers, baseball cards, computers, arts and crafts, computers,
> jewelry, and, computers. Maybe that's a little too sarcastic.

No. I think so too.

> And yes, there were radios and BA's to be had, though not many. I got there
> late - around 9:30 and I suspect a lot of the good stuff was already gone.

It must have been gone by 7:45 too.

> But I did find some coils, capacitors, knobs, etc. And 5 NIB 5763 tubes,
> military issue.
>
> One final comment. I suspect there will be some general criticism of the ARRL
> for this "national" convention. Not very well organized, very poor signage,
> attendance about half that predicted. It was neat meeting Chuck Brady, though,
> an astronaut who was involved in SAREX.

A number of the old farts I talk too were very negative about the Peoria

hamfest being moved...the ARRL...etc. I was very positive...talked it up....etc. I was wrong and they were right.

Chuck, KE9UW

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Cal Eustaquio N6KYR <ceustaqu@dot.w6bhz.calpoly.edu>
Subject: R-390A weekend/resto
Message-ID: <Pine.SUN.3.91.960915223122.2828B-100000@dot.w6bhz.calpoly.edu>

Hi:

Looks like you can add me to the R-390A "festivities." Finished up my electro/mechanical restoration of a Capehart #588 unit. This is what happened as follows:

1. Took delivery of unit on 7 Sept.
2. Inspected and reinstalled knobs and front panel screws. Did the following check on rx. Brought up unit on variac. Found that V505 did not light. No "white noise" heard. However, audio hum adjustable on gain control found on front panel. Removed IF, audio, PT0, and ps modules from chassis. Checked all tubes on those modules. RT-510 (3TF7) found bad. Also V502 (6149/6BA6) low emission. Replace both units. Washed, rinsed, and cleaned all removed subchassis from rx and used solution of simple green and water to get rid of dust, dirt, and grime. Baked all units at 150F in oven to dry out water. Sprayed contact cleaner on sockets.
3. Sept 9. Reinstalled all removed units and brought up rx on variac. Same condition as entry #1 except that V505 now lights. New 3TF7 ballast glows. Checked PT0 tube (lit). Still no "white noise". Fed modulated 455 kc into J518. No dice. Stopped work.
4. Sept 10. Reread manual. Checked for presence of B+ on IF circuits by removing an IF tube and checking plate. No indication. Went back to 1/8 amp B+ fuse. Checked continuity. Bad (though visible signs show no apparent open). Replaced fuse and "relit" the rx via variac. Viola. Signals found on 9 and 10 Mhz bands (all else seems attenuated).

To be continued. . .

"Airborne--All the Way"
"Armor--On the Way"

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: jcreid@CCGATE.HAC.COM

Subject: Rider's on CD ROM?

Message-ID: <9608168428.AA842899929@CCGATE.HAC.COM>

Hi Gang,

I was curious if anyone knows whether there is a CD ROM version of the Rider's Perpetual Troubleshooting Manuals. I know the RCA Radiotron book on available that way. I'd be willing to pay serious money for the electronic version of the Rider's.

-Jim N6SVS

jcreid@ccgate.hac.com

Gardena, CA

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996

From: Karan Lee Carruth <klccarru@tenet.edu>

Subject: Re: Rider's on CD ROM?

Message-ID: <Pine.OSF.3.91.960916153805.15001C-100000@gaston.tenet.edu>

Check with Radio Era Archives at (800) 684-3912, fax (214) 357-4693 or by mail:

Radio Era Archives
2043 Empire Central
Dallas, TX 75235

Lenox, WA50VG

On Mon, 16 Sep 1996 jcreid@CCGATE.HAC.COM wrote:

> Hi Gang,

> I was curious if anyone knows whether there is a CD ROM version of the Rider's
> Perpetual Troubleshooting Manuals. I know the RCA Radiotron book on available
> that way. I'd be willing to pay serious money for the electronic version of the
> Rider's.

>

> -Jim N6SVS

> jcreid@ccgate.hac.com

> Gardena, CA

>

>

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996

From: John Shriver <jas@shiva.com>
Subject: Re: rise time
Message-ID: <199609161621.MAA21686@shiva-dev.shiva.com>

There is an article in the latest Electronics Now about a little battery-operated square wave generator with about 700 picosecond rise time. They suggest it's just the thing to bring to a ham flea to test out the scopes for sale. About \$50 as a kit with PC board and surface-mount parts. (Lead dress matters too much to do this without a PC board!)

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: RISE TIME
Message-ID: <9609161530.aa05295@pcusa01.ecunet.org>

Square waves are very revealing waveform for testing amplifiers for at least two reasons:

- A. They have a readily identifiable shape so distortion is easily spotted, i.e. then they're not square any more!
- B. Particular amplifier distortions can are easily categorized as to specific cause.

For example, amplitude response vs. frequency deviations produce top and bottom line square wave tilts (if there is a low frequency rolloff) and rounding-off of sharp corners (if there is a high frequency rolloff) of square waves.

Further, phase response vs. frequency deviations cause different distortions, e.g. cusp shapes appear in the square waves' tops and bottoms.

The effects of combinations of amplitude and phase of distortion are also discernible.

Square wave testing gives a way of assessing both the frequency and phase (time domain) performance of an amplifier at the same time. The time domain behavior of some amplifiers (e.g. o'scope and hi-fi) is very important because transient waveforms need to be faithfully reproduced by them.

No, that's not the whole cake (for example it leaves harmonic distortion out), but it gives a quick and good snapshot of what's happening in an amplifier.

A well-known formula relates the rise time of an amplifier to its

bandwidth: $\text{Bandwidth [MHz]} = 0.35 / \text{Risetime [microSec]}.$

The use of output rise time (during which amplitude goes from 10% to 90% of full level), caused by the input of the leading edge of a square wave, to infer an amplifier's -3 dB bandwidth this way requires caution if it is to be accurate. Specifically:

1. The amplifier must behave as a 'minimum phase' system, and
2. The amplifier's high frequency rolloff shape must be Gaussian.

The first requirement can only be met for frequencies well within the flat portion of the amplifier's amplitude vs. frequency response. It cannot be met toward, at, and beyond its edges. A minimum phase system is one whose amplitude response vs. frequency and phase response vs. frequency are uniquely determined from each other. (P.S. for you audiophiles, most transducers, e.g. speakers, mics, phone pickups, are *not* minimum phase.

It's not generally appreciated that phase aberrations (specifically, changes in group delay, which is proportional to the slope of the phase response plot) occur toward both ends of the frequency range. This happens even where an amplifier's amplitude response is still perfectly flat!

Therefore, an amplifier's 'minimum phase bandwidth' will be quite a bit less than even its flat (+0 dB) amplitude response bandwidth, making the the latter parameter (and even more so the -3 dB bandwidth) less meaningful.

Waveforms that have sharp leading edges (like square waves and unit step functions) have spectra that are especially rich in high frequency components. If all of those components are not passed without amplitude and phase errors by an amplifier, i.e. that they lie within the minimum phase bandwidth, there will be waveform distortion.

Music is made up of mostly transient waveforms. Faithful reproduction of them requires both amplitude and phase (minimum phase) linearity over the bandwidth of interest.

That's why very wide bandwidth amplifiers are favored for o'scope (and high fidelity) use to, among other goals, minimize phase (time domain) distortion. What you are then getting is the widest possible bandwidth of desirable minimum phase behavior.

The second requirement is not generally found in amplifiers. They often roll off at the high-frequency end at a rate of about 20 dB per decade (10 times) of frequency, which is much less rapid than a Gaussian shape.

The main point is that a minimum phase system with a Gaussian-shaped high frequency rolloff will impose a specific kind of amplitude and phase distortion to the leading edge of a sharp pulse.

So, use of the factor '0.35' in the Bandwidth vs. Risetime formula given is correct *only* when measuring an amplifier whose amplitude and phase vs. frequency responses follow from these requirements.

Only then will the bandwidth be precisely predictable in this way, i.e. a particular rise time will accurately correspond (by a constant factor) to a particular bandwidth.

Whew!

-0-

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: "Serafin G. Menocal" <serf@bellcore.com>
Subject: Risetime
Message-ID: <199609161355.JAA27535@mailee.bellcore.com>

There's a handy formula to convert risetime to bandwidth.

$\text{Bandwidth} = .35 / \text{Risetime}.$

For instance, a 10% - 90% risetime of 200 ps requires a bandwidth of

$.35 / (200 \times 10^{-12}) = 1.75 \text{ GHz}.$

This comes in very handy when testing the speed of lasers.
It's also important to recognize the limits of the risetime you'll be able to measure with the bandwidth of the scope on hand.

Serf

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: jml@innercite.com (Jim Lockwood)
Subject: SBE-36 at Foothill????
Message-ID: <199609160218.TAA19252@spider.innercite.com>

Gang,

The SBE-36 was apparently the end of the SBE line of SSB transceivers. It was promoted around the time that Linear Systems owned the SBE trademark. Unlike it's almost-QRP ancestors the 33 and the 34, this was a QRO rig, with 500 Watts DC input to the plate. It also had Nixie tube digital display, reflecting the era in which it was made.

Discussions with others about the SBE transceivers have resulted in the consensus that the SBE-36 may not have been produced, just promoted.

Yet, several have told me that there was an SBE-36 at Foothill yesterday and that it changed hands.

My question is did any one on BA buy this radio? If so, I'd like to correspond with you about it.

73 and thanks

Jim - km6nk

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Bill Coleman WF2A <wf2awdc@ibm.net>
Subject: SP-600 Tuning Drive train (aka plea for 'tires')
Message-ID: <BMSMTP8428881902wf2awdc@pop03.ca.us.ibm.net>

OK all - many thanks for the input... (K9EUI, NQ5T, and others)

It certainly looked like there was some kind of 'tire' - but I guess it was just decades of accumulated crud. Problem is I got it tooooooo clean! I suppose it's time to order the manuals. Will try the rosin suggestion tonight. Keep your eyes peeled to the Northeast, power goes on tonight too (gently).

Bill Coleman (WF2A)

Email: wf2awdc@ibm.net (personal)
Email: wf2a@endicott.ibm.com (work)
Email: wf2a@wf2a.wny.ny.usa.na (packet)

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: knudsen@gvmail.ih.lucent.com
Subject: Re: SP-600 Tuning Drive train (aka plea for 'tires')
Message-ID: <9609161619.AA04462@bock.ih.lucent.com>

Friction idlers and pinch wheels in an SP600?
Like in the "consumer" Hammarlunds?

Sheehs, and all this time I thought the SP600 was STRICTLY gear-drive from knob to dial to condenser gang.
Is nothing sacred?
Even the SX-100 is strictly gears on the main tuning....
First the Easter Bunny, then Santa Claus, now the SP600.
I'll think I'll skip solid food at lunch....73, mike k aa9rg

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: "Grant Youngman" <nq5t@gte.net>
Subject: Re: SP-600 Tuning Drive train (aka plea for 'tires')
Message-ID: <199609161805.NAA20840@mail1.gte.net>

> Friction idlers and pinch wheels in an SP600?
> Like in the "consumer" Hammarlunds?

Well, yes .. a friction drive. But NOTHING like what appears in the lesser Hammarlund radios. No pinch wheels. It works perfectly -- with none of the "toothiness" which can appear in split gear designs for backlash prevention.

Grant

Grant Youngman / NQ5T
nq5t@gte.net
[HTTP://home1.gte.net/nq5t/index.htm](http://home1.gte.net/nq5t/index.htm)

Beautiful downtown Double Oak, TX
(near Dallas)

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: mknudsen@lucent.com
Subject: Re: SX-117 Main Tuning Knob
Message-ID: <9609161555.AA04415@bock.ih.lucent.com>

If you find TWO SX-117 knobs, well, I need one too.
73, mike k aa9rg

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: bowes@ibm.net
Subject: TM11-2627 Manual WTD
Message-ID: <9609160236.AA0017@localhost>

I am looking for a copy of an Army manual for a WWII vintage tube tester model

I-177-B. The Army number for the manual is TM 11-2627. This tester is similar to a TV-7. I am willing to cover the expenses for a repro. Thanks.

Tom Bowes
KB8NDS

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: TORQUE TO TUNE BA'S
Message-ID: <9609161530.aa05340@pcusa01.ecunet.org>

Easy way to improve 'feel' of BA tuning knobs: Jam some large-gauge solder into the hollow areas in back of the tuning knob. You could also melt lead & let it drop in but that tends to deform plastic knobs.

Of course this will do nothing to reduce tuning knob torque requirements! What's needed is motorize tuning!

I remember my uncle's DuMont tv which used the Mallory Inductotuner. Continuous tuning from 50 to 220 MHz. It had a huge foot long tuning dial & a motor to get you from one end of the tv band to another in a hurry.

-John Sehring (09/16/96 9:34 am MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Joe Serocki <jserocki@allstate.com>
Subject: Trade computer for ???
Message-ID: <s23c56c5.027@allstate.com>

I have a p24t system, 4x cdrom, vga, mouse, 8/16meg ram (depends on the toys ya got), 1 gig hard, that I am looking to trade. Whatcha got, I value the system at about \$600 or so.... In NE Illinois area only, I won't ship. I'm just south of Fox Lake, work in Northbrook....

73

From boatanchors@theporch.com Mon Sep 16 15:51:22 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: TUBE INFO ON CD-ROM
Message-ID: <9609161530.aa05282@pcusa01.ecunet.org>

How about the Radiotron Designers Handbook on that CD-ROM too.

Also, RCA's Transmitting Tube manual, plus other manufacturers, e.g. Sylvania.

-John Sehring (09/16/96 8:56 am MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: "F r6fqHo!ht" <75121.100@CompuServe.COM>
Subject: Tubes
Message-ID: <960915221622_75121.100_IHV44-1@CompuServe.COM>

Gang, while looking through my tube boxes, and not finding the 6AZ8 tubes that I listed, I ran across more 3TF7 R-390A ballast tubes that I originally posted for \$15.00 and sold both. Now that I have 8 more I will sell these at \$10.00 ea plus shipping of \$3.20.

I also found more of the JAN 5814A tubes for the R390-A (which takes 7 ea) and will reduce the price from \$15.00 per box (for the BA gang) to \$10.00 per box of 5 plus \$3.20 shipping.

Let me know via e-mail your wants, listing your address so I can get the box ready.

Send check to:
Raymond Cote
1405 Dominis St #105
Honolulu Hawaii 96822

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Hadley Allhands <had@halcyon.com>
Subject: TV-7 Question
Message-ID: <Chameleon.4.01.2.960915170419.had@.halcyon.com>

Hi BA'ers

Well after who knows how many years the old TV-7/B decided to quite. Looks like the meter rectifier (CR-101) has retired.

Is there a perfered replacement methode?

Thanks for the help, Hadley

Name: Hadley Allhands, K7MLR
E-mail: had@halcyon.com hadley@arva.com

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: Rodger Singley <rbsingl@rs6000.cmp.ilstu.edu>
Subject: Valiant chirp gone!
Message-ID: <9609161444.AA86952@rs6000.cmp.ilstu.edu>

First, thanks to all who offered suggestions on this unit. The main culprit was RF into the VFO-close inspection revealed a previous owner had greatly enlarged the slot for the VFO drive shaft. A little sheet metal work restored the shielding properties. I then found that the 6AU6 in the VFO was adding to the problem, it caused a frequency shift of about 800hz under a 6 second key down. Now the only remaining problem seems to be a little parasitic oscillation in the final. On 20 and 15 plate current will increase to about 30 mils depending on the tune and coupling capacitor selection; discovered this problem while trying to adjust my antenna tuner at low power which gave interesting swr results. Current suppressors are about 10 turns around a 330 ohm resistor. Any suggestions, I seem to remember a similar discussion for Viking II's a short time ago.

I have had several inquiries about the parts unit and I am trying to decide what to do with it-the only major component missing is the VFO so I am tempted to restore it (although given the problems with my other Valiant maybe not having a VFO isn't such a bad thing!). I am also curious about the distinction between kit and factory assembled Valiants, the complete unit has riveted sockets which I assumed meant factory unit but the wiring on the incomplete unit (screw held socketes) is much cleaner as are the solder joints. Comments?

Again, thanks to everyone for their help!

Rodger WQ9E

rbsingl@ilstu.edu

From boatanchors@theporch.com Mon Sep 16 09:53:44 1996
From: carl yaffey <cyaffey@sprynet.com>
Subject: WANTED: AT-1, Collins speaker

Message-ID: <2.2.32.19960916135448.006ff590@m1.sprynet.com>

I'm looking for a speaker for the 75A4 I just bought, and I would love to have a nice Heath AT-1 to go with my S38.

TNX es 73,

Carl K8NU

Carl Yaffey K8NU cyaffey@sprynet.com 614 268 6353 Columbus OH

Banjo player for One Riot One Ranger, independent software developer.

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